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No. 13: Contributions to Mesa Verde Archaeology: IV, Site 1086, An Isolated, Above Ground Kiva in Mesa Verde National Park, Colorado

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SERIES IN ANTHROPOLOGY

No. 13

CONTRIBUTIONS TO MESA VERDE ARCHAEOLOGY: IV
SITE 1086, AN ISOLATED, ABOVE GROUND KIVA IN
MESA VERDE NATIONAL PARK, COLORADO

By

ROBERT H. LISTER

UNIVERSITY OF COLORADO PRESS

BOULDER, COLORADO, FEBRUARY, 1967

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PROFESSOR OF ANTHROPOLOGY

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PREFACE

This report deals with a part of the scientific investigation being conducted by the recently established University of Colorado Archaeological Research Center at Mesa Verde National Park, San Juan Basin, in cooperation with the National Park Service, the Bureau of Land Management, and the Bureau of Indian Affairs. The research herein described was supported by a grant from the National Science Foundation.

Site 1086 was excavated by Navaho laborers and University of Colorado students as part of our 1965 field program. Robert H. Lister was in general charge of the project; James A. Lancaster directed the field work, assisted by Jack E. Smith and Thomas Bowen, all of the staff of the University of Colorado Archaeological Research Center.

Following excavation, the site was stabilized by a National Park Service crew directed by David A. Decker. It may be visited by climbing to the summit of the conical knoll on the north side of the Morfield Campground, Mesa Verde National Park.

ROBERT H. LISTER
Boulder, Colorado
October, 1966

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I. INTRODUCTION

While conducting a salvage archaeological excavation in 1965 at Site 1088, a late Pueblo II village in Morfield Canyon, Mesa Verde National Park, attention was drawn to a nearby ruin located on top of a small conical hill. The hill, on the north edge of the Morfield Campground, rises 120 feet above the canyon floor and is covered with an association of scrub oak, juniper and pinyon pine. The ruin atop the hill, Site 1086, was a circular rock-strewn mound with a depression in its center and had been described in the archaeological survey of the park as a tower. In fact, our first exploratory trench into the mound tended to confirm that the site was indeed a tower, for the cut exposed the top of a masonry wall almost five feet thick which we judged to be the base of a tower. Continuing the trench across the mound revealed a section of the other side of the circular wall to be only about two feet thick. This discrepancy in the width of the wall was explained as excavations continued and it became apparent that the wall was actually only about two feet thick, but our first exposure of it occurred at a point where a wide buttress had been built against its exterior surface. Despite the relative narrowness of the wall of the structure, we still felt that it was a tower because it was circular in plan and its wall stood above ground level. However, when the fill was removed from the unit and a banquette, southern recess, ventilator system, and firepit were exposed, it became apparent that we were dealing with an above ground kiva rather than a tower. Its size and both its features and lack of certain elements ruled out the possibility of it being a Great Kiva, which frequently are found in prominent locations disassociated from habitation units.

Clearing the area surrounding the kiva brought to light a rather complex series of walls and wall stubs whose relationships to the kiva were not immediately clear. Only after the entire site had been excavated and notes made of the levels of the bases of the walls, the types of fill between and beneath the walls, and both the horizontal and vertical relationships of the features established, could we correctly identify the components of the site and its developmental sequence.

The only other archaeological remains on the hill consisted of a small partially preserved unit of two rooms located about 60 feet southeast of the kiva

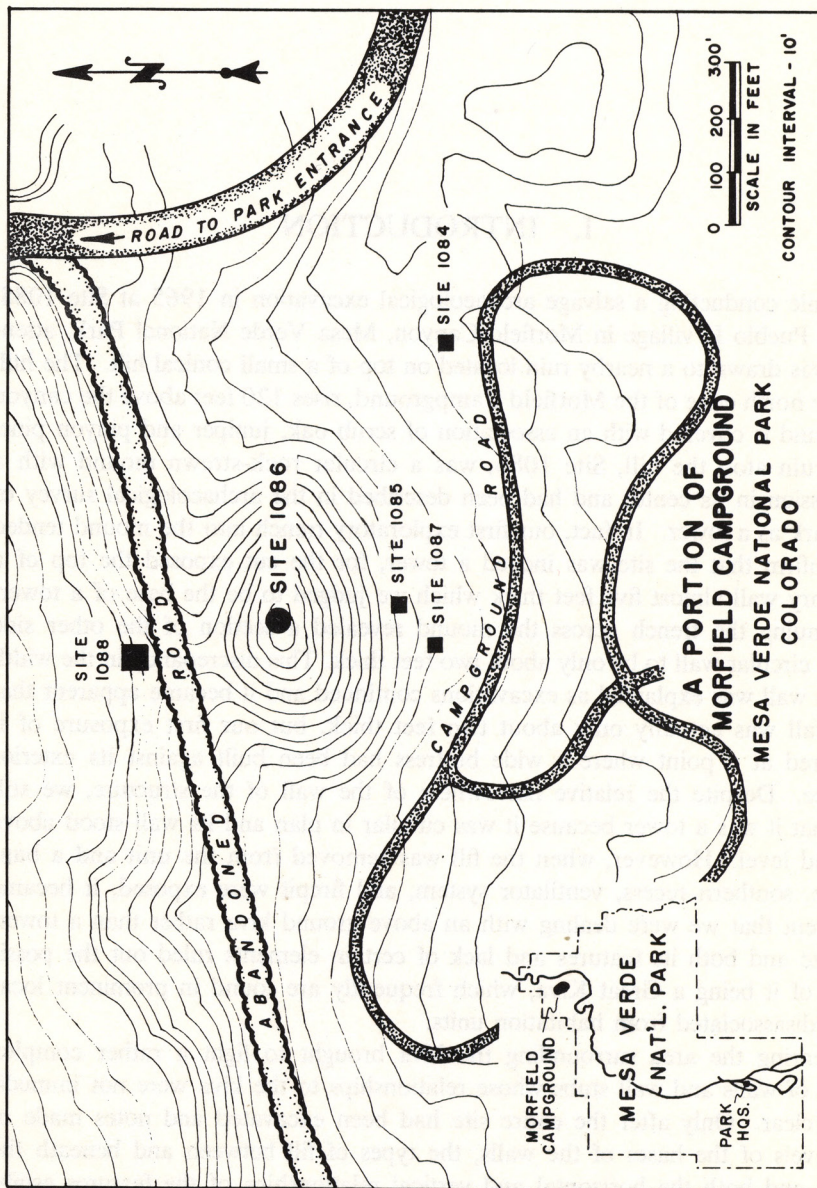


FIGURE 1. Location of Site 1086 in Mesa Verde National Park.

on the slope of the hill. Only portions of the lower course of the walls, which had been a single stone wide, remained in place. There was no apparent relationship between it and the kiva. The two probably were not contemporaneous.

Since neither above ground kivas nor kivas which are independent of a village are normal occurrences in the Mesa Verde area, it is felt that a complete description of the site and its postulated sequence of development are warranted. The following account, therefore, describes the kiva and its associated features, notes observations made during the excavation, and lists the specimens recovered from the site. Our interpretation of the development of the kiva, its unusual features, and probable age are included. The accompanying photographs and illustrations are designed to supplement the written descriptions.

II. SITE 1086

DIMENSIONS

KIVA

Diameter, floor level—16 ft. 2 in.

Diameter, above banquette—18 ft. 6 in.

Diameter, external—21 ft. 2 in.

Greatest height of kiva, floor level to top of standing wall (incomplete)—4 ft. 5 in.

Average height of banquette above floor level—2 ft. 5 in.

Average width of banquette—1 ft. 1 in.

Southern recess—floor, level with kiva floor; width, 5 ft. 5 in.; depth, 1 ft. 3 in.; height from floor of southern recess to top of standing wall, 4 ft. 5 in.; height of ledge above floor, 2 ft. 7 in.; width of ledge, 3 in.

Ventilator tunnel—depth of bottom of tunnel below floor level, 1 ft. 5 in.; average width of tunnel, 1 ft. 8 in.; length from front edge to rear of ventilator shaft, 10 ft. 6 in.

Ventilator shaft—height, 5 ft. 1 in.; surface opening, 13 in. by 14 in.

Pilasters—number, six estimated; average width of two, 9 in.; average width of four, 1 ft. 10 in. estimated; height, unknown.

Firepit—length, 2 ft.; width, 1 ft. 7 in.; depth, 9 in.

Deflector—none.

Sipapu—none.

Niches—none.

Postholes—none.

Axis, ventilator tunnel—firepit, North 16° West.

EXTERIOR FEATURES

Approximate greatest diameter of dirt platform on which kiva is built—25 ft. 8 in.

Average height of retaining wall for dirt platform—1 ft. 9 in.

Approximate greatest diameter of basal platform after addition of rubble fill—35 ft.

Buttresses: No. 1—length, 5 ft. 6 in.; width, 2 ft. 10 in.; height (incomplete), 3 ft. 8 in. No. 2—length, 3 ft. 8 in.; width, 2 ft.; height (incomplete), 2 ft. 6 in. No. 3—length, 3 ft. 2 in.; width, 2 ft. 10 in.; height (incomplete), 2 ft. 6 in. No. 4—length, 12 ft. 5 in.; width, 2 ft. 8 in.; height (incomplete), 4 ft.

Retaining wall surrounding kiva — north-south along kiva axis, 34 ft.; east-west, 37 ft.; average width of wall, 2 ft. 10 in.; average height of wall (incomplete), 3 ft. 9 in.

ARCHITECTURAL DETAILS

KIVA

Walls and banquette: The walls and banquette of the kiva are faced with small, generally unshaped sandstone blocks and slabs set in mud mortar. Thin spalls are included in the mortar

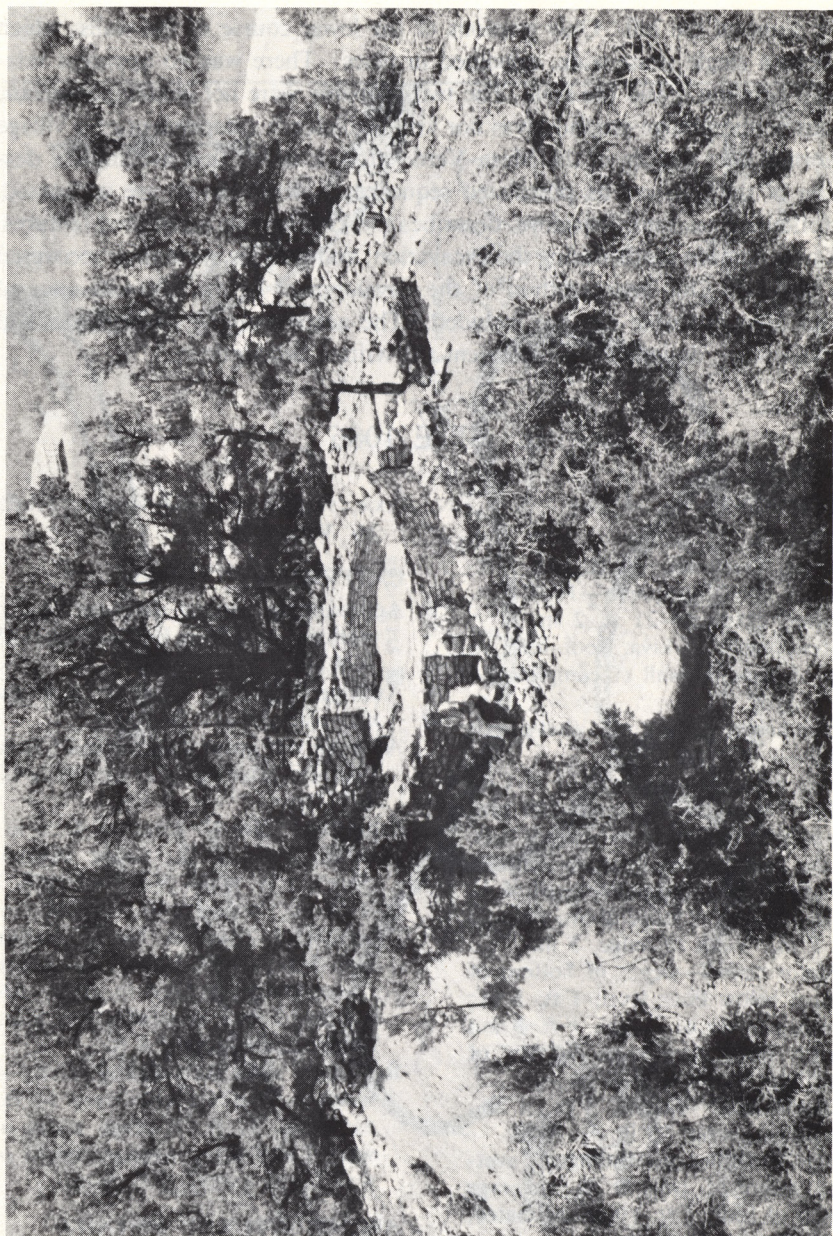


PLATE 1. Hilltop and kiva, during excavation, looking southwest.

on the exterior of the structure but rarely occur on the interior. Surfaces of the interior of the wall are smooth, uniform, fairly well coursed, and have narrow joints between stones. This was achieved through the employment of stones whose exposed edges are fairly flat. Surfaces of a few of the larger stones are pecked. Masonry above the banquette contains slightly larger stones than are employed in the banquette. The exterior of the kiva wall is much rougher than the interior. Stones vary more in size, have irregular edges, and the joints between the stones are wider and contain numerous spalls.

The upper portion of the banquette was poorly preserved, but it stood to its original height in several places. It is assumed that six pilasters supported the cribbed log roof of the kiva; however, remains of only two were found. Each consisted of a single row of rectangular stones set flush with the edge of the southern recess and extending from front to rear of the banquette. Obviously they stood higher when the kiva was in use, but their original height could not be determined. No other pilasters were preserved, but in three places where pilasters might reasonably be expected, there were adobe layers on the banquette which seem plausibly to have been bases for pilasters. These were of sufficient width to indicate that each pilaster had been at least two stones wide. All evidence of the sixth pilaster had disappeared. As stated above, it is believed that six pilasters had existed. Those on either side of the recess were a single stone wide while the other four, spaced evenly about the banquette, were more than twice that width. No niches were found in either the wall or the banquette. There was no plaster remaining on the interior of the structure.

The shallow southern recess, which is faced with the same kind of masonry used elsewhere in the kiva, is merely a gap in the banquette. It extends only to the kiva wall and is actually more a

banquette recess than a southern recess. There is a narrow ledge on the three sides of the recess at the same level as the top of the banquette.

Ventilator: The ventilator system, constructed at the south side of the kiva, consists of a subfloor, masonry walled horizontal tunnel dug almost from the center of the kiva floor through the southern recess, beneath the kiva wall, and beyond it to a point where it joins a masonry lined vertical shaft. The shaft is enclosed in a buttress-like extension of the kiva wall built of rubble and faced with masonry. The horizontal tunnel was roofed with small poles beneath the kiva wall and was covered with stone slabs, set level with the floor of the kiva, inside the ceremonial chamber. The slabs on top of the tunnel did not extend its entire length, leaving an opening into the kiva at its end near the center of the structure. The opening probably had been framed with masonry. The floor of the tunnel was dug to bedrock.

Floor: The kiva is built on top of the artificially leveled crest of the hill. Its packed earth floor, therefore, rested in part upon fill and, on the south, upon bedrock. A firepit and the horizontal tunnel of the ventilating system had been dug into the dirt platform. The rectangular slab-lined firepit is located approximately in the center of the kiva but rather than being aligned with the axis of the structure is turned at about a 45° angle to the kiva axis. It was filled with wood ash. No other features were found on the floor of the structure. There was no necessity for a deflector, for a subfloor ventilator tunnel does not produce a draft directly onto the fire as was the case with an above floor ventilator.

EXTERIOR FEATURES

Four stone buttresses are built against the outside of the kiva. Buttresses 2 and 3, on the west and north sides of the unit, are narrow and are constructed



PLATE 2. Kiva, after excavation, looking southeast. Note the following features: thick retaining wall in foreground; Buttress 2 in center of view; Buttress 3 on left; the firepit, subfloor ventilator tunnel, and southern recess within the kiva; and buttresses 1 and 4 on the exterior of the far wall on either side of the recess.

of irregular sandstone blocks set in mud mortar. Buttresses 1 and 4 are built on either side of the southern extension of the kiva wall in which the vertical shaft of the ventilator is located. Each of these extends for a considerable length along the exterior of the kiva wall and is composed of rubble with a masonry veneer. These four supports must have been constructed to strengthen the freestanding wall of the kiva, which is presumed to have been subjected to great outward pressure by the weight of the logs and the dirt employed in its roof. The original heights of the buttresses could not be determined.

The basal platform of dirt and clay upon which part of the kiva was built was retained on the northeast by a curved stone wall a single stone in width and three courses high. On the southwest a short, straight wall of similar construction served the same purpose.

The thick wall of roughly shaped blocks of sandstone, built around the kiva in its ultimate stage of use, is two stones thick in places, but in other sections it has rubble core with a stone facing on both sides. The inside surface of this wall is very rough and uneven, but the outside is relatively smooth and well executed. Part of this wall east of the kiva was almost completely destroyed, but enough of its lower course remained in place to determine its location.

OBSERVATIONS DURING EXCAVATION

The fill taken from the kiva was a mixture of fine soil, clay, and much rock which had fallen into the structure from its walls following abandonment. The floor was of hard-packed clay. Below most of the floor level, there is a layer of various colored clays which had been spread over the hilltop to prepare a level surface for the kiva. On the south, remnants of the clay floor

rested directly upon the bedrock of the top of the hill.

Testing beneath the kiva floor and in deposits outside the kiva wall indicated that the original small, conical summit of the hill probably had an exposure of bedrock, some areas of yellow clay, and several ledge-like rock outcrops upon its irregular surface. Over this, a layer of clay, likely obtained from the valley below, was spread to a depth varying from 12 to 18 inches. Low rock walls held this material in place on the northeast and southwest.

There were no remnants of the kiva roof, aside from the pilasters which had supported it. The structure did not burn. The roof members either were removed for reuse elsewhere at the time of its abandonment or they collapsed and decayed completely prior to our excavations. Our assumption that a roof of cribbed logs surmounted by a layer of packed earth covered the kiva is based upon numerous examples of kivas in the Mesa Verde area containing a banquette and pilasters which are known to have had such a roof. There is no reason to believe that this above ground unit could not have been so covered. Had it possessed a flat roof, it should have had postholes in its floor and should not have contained pilasters.

During excavation fragments of thin stone slabs which had covered the top of the horizontal ventilator tunnel in the kiva were taken from the fill of the tunnel. A number of small fragments of decayed poles were found in the debris in the tunnel beneath the kiva wall. They were pieces of small poles which had been placed side by side to form the roof of the rear section of the tunnel. A thick layer of mud had been placed over the poles before the kiva wall was constructed.

A layer of packed earth reaching a maximum thickness of 3 ft. 8 in. above the base of the kiva had been placed between the wide stone retaining wall which surrounds the kiva and the kiva

proper. Because of the irregularity of the top of the wall, it appears as though it formerly stood to a greater height, hence, supported a higher earthen platform than was extant at the time of excavation. How much higher it stood is not known.

Only one large fragment of wood was encountered. It was a badly decayed section of log, 4 ft. 3 in. long and about 5 in. in diameter, which was found leaning against the outside of the kiva near Buttress 2. Neither its use nor its original position could be determined. It was in such poor condition that it could not be preserved for dating purposes.

SPECIMENS RECOVERED

A very small assortment of specimens come from the kiva and its environs. Two manos, a fragmentary slab metate, several flakes of stone, and 108 identifiable potsherds comprise the collection.

The sherds, all of which are typically Mesa Verde, have been classified as follows:

Mesa Verde Gray Ware (probably Mancos Gray)	6
Mancos Corrugated	51
Mancos Black-on-white	16
McElmo Black-on-white	35
Total	108

There are three types of gray pottery in the Mesa Verde area, Chapin Gray, Moccasin Gray, and Mancos Gray, classification of which depends upon rim or neck sherds. Body sherds of the types are indistinguishable. Unfortunately, the few gray sherds from the kiva are body sherds and could belong to any of the three types; however, judging from the temporal range of the remainder of the collection, the gray sherds from the site probably are Mancos Gray.

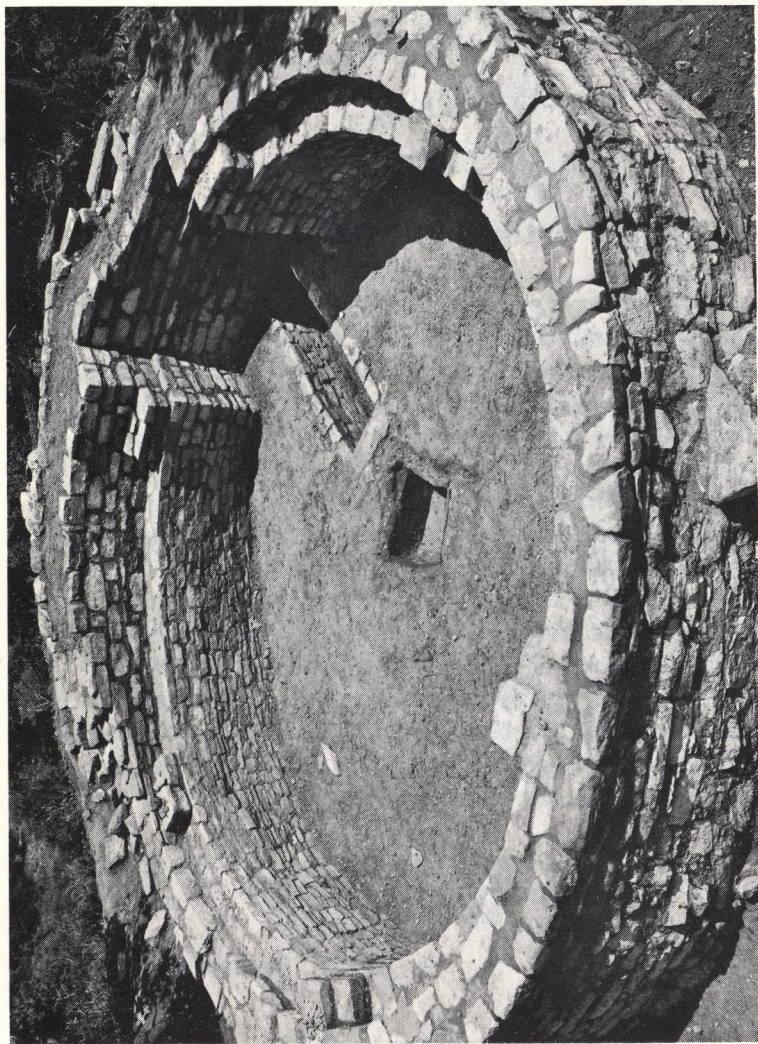
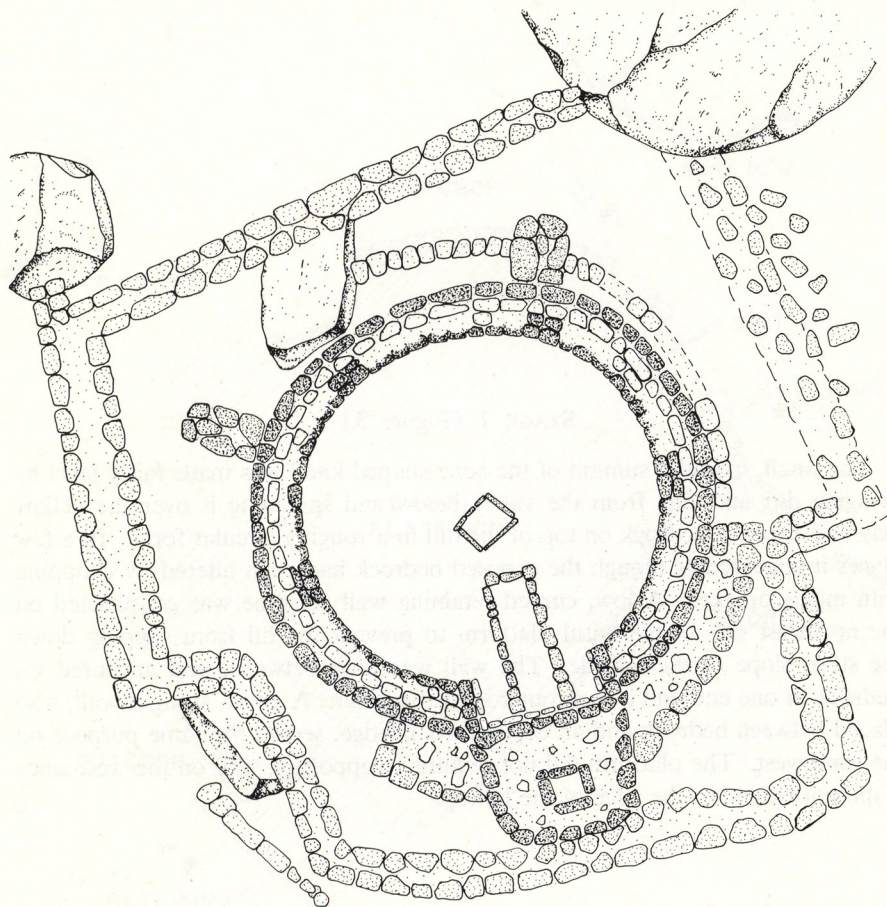


PLATE 3. Kiva, after stabilization, looking southeast. Note Butress 2 in foreground, kiva wall, banquette, pilasters, fireplace, ventilator, southern recess, and buttresses 1 and 4. The pilasters on either side of the recess have been reconstructed the same width as the others; actually they were only one stone wide upon excavation. (Photo courtesy National Park Service.)

III. SEQUENTIAL DEVELOPMENT OF SITE 1086

This hypothetical account of events in the history of Site 1086 is based upon archaeological evidence still visible at the site and upon observations made during its excavation. The growth of the site has been divided into stages, and an illustration reconstructing each stage is presented. The amount of elapsed time between stages is not known; however, it probably was of uneven increments. Between the leveling of the top of the hill and the building of the kiva, there likely was no break in time, but the times involved following the completion of the kiva and the addition of the supporting buttresses, and later the building of the surrounding dirt platform were of greater but unknown duration. Nevertheless, the scarcity of artifacts recovered from the excavations and the pottery complex associated with the kiva lead to the assumption that it was utilized for only a short period of time, probably between A.D. 1080 and 1120.

The accompanying Figure 2 is a plan of the kiva and all of its external features exposed by our excavations. To better understand the order of events which led to this ultimate form, the following stages, or conditions extant at a given point in the history of the kiva, are presented.



SITE 1086

**MESA VERDE NATIONAL PARK
COLORADO**

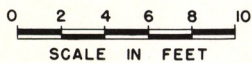


FIGURE 2. Plan, Site 1086.

STAGE 1 (Figure 3)

The small, irregular summit of the cone-shaped knoll was made fairly level by bringing dirt and clay from the valley below and spreading it over the yellow clay and exposed bedrock on top of the hill in a roughly circular form. In a few places it appeared as though the exposed bedrock had been altered by chopping with mauls or axes. A low, curved retaining wall of stone was constructed on the northeast side of the basal platform to prevent the fill from slipping down the steep slope of the hillside. The wall was built between, and anchored to, bedrock at one end and a rock outcrop at the other. A short, straight wall, also placed between bedrock and an exposed rock ledge, served the same purpose on the southwest. The platform did not require a supporting wall on the west since it did not extend to the edge of the hilltop.

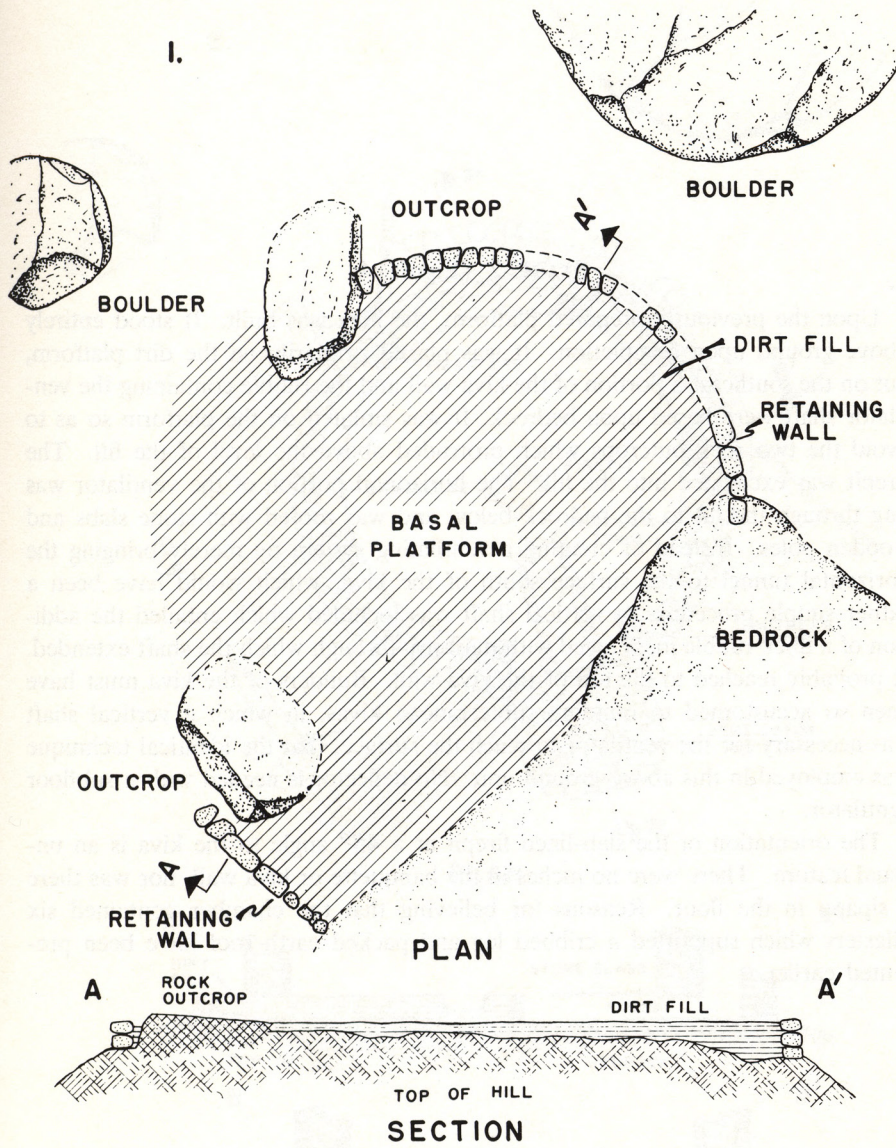


FIGURE 3. First Stage of Kiva.

STAGE 2 (Figure 4)

Upon the previously prepared platform, the kiva was built. It stood entirely above ground upon completion. It was placed primarily on the dirt platform, but on the southeast a portion of the kiva wall and the rubble containing the ventilator shaft were based upon bedrock. It was situated on the platform so as to avoid the two rock outcrops which protruded above the level of the fill. The firepit was excavated into the fill. The horizontal portion of the ventilator was dug through the fill to the bedrock below and was roofed with stone slabs and wooden poles. Instead of creating a ventilating system by merely bringing the horizontal tunnel to the surface south of the kiva, which would have been a rather simple procedure, a vertical shaft was included which entailed the addition of a thick rubble mass faced with masonry through which the shaft extended. It probably reached to the top of the kiva wall. Builders of the kiva must have been so accustomed to building subterranean kivas, in which a vertical shaft was necessary for the ventilator to reach the surface, that the identical technique was employed in this above ground unit. No deflector is needed with a subfloor ventilator.

The orientation of the slab-lined firepit at a 45° angle to the kiva is an unusual feature. There were no niches in the banquette or kiva wall, nor was there a sipapu in the floor. Reasons for believing that the chamber contained six pilasters which supported a cribbed log and packed earth roof have been presented earlier.

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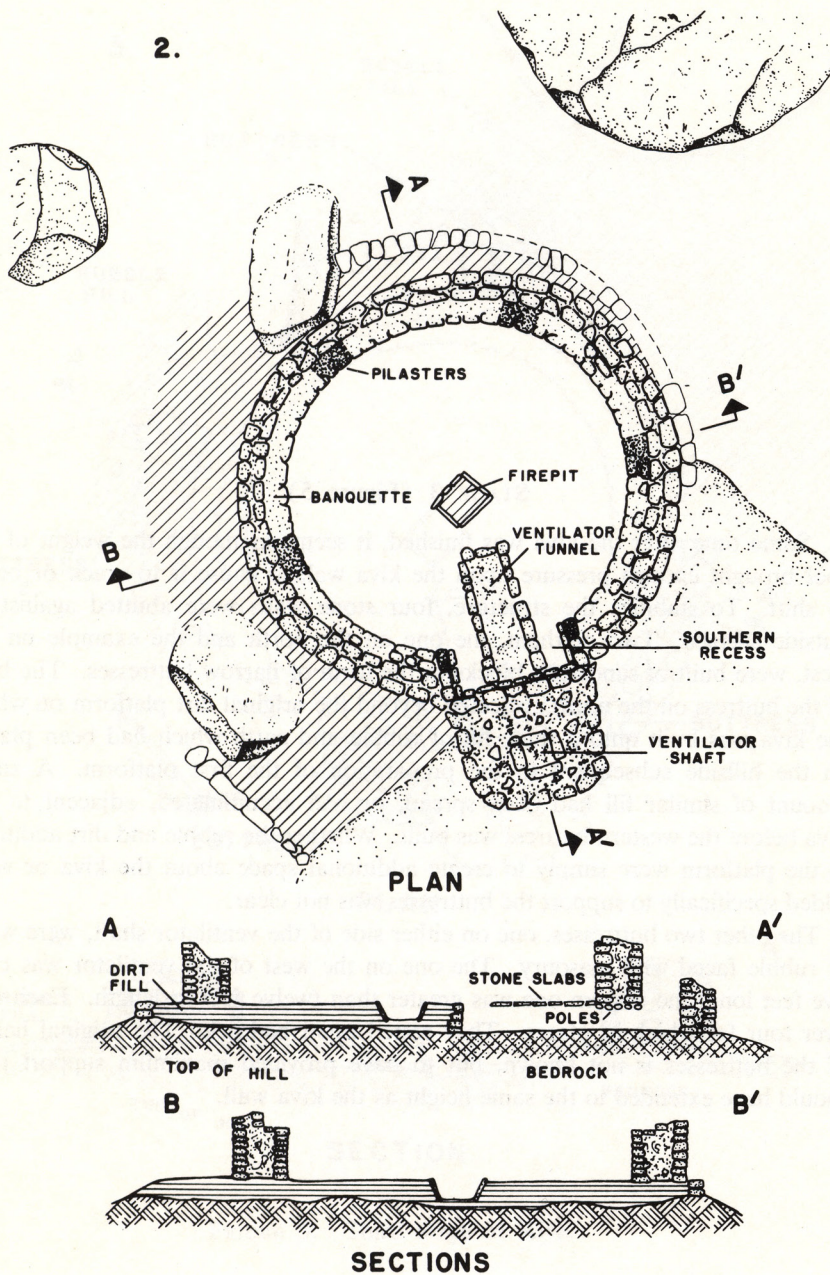


FIGURE 4. Second Stage of Kiva.

STAGE 3 (Figure 5)

Some time after the kiva was finished, it seems as though the weight of the roof brought enough pressure upon the kiva wall to cause it to crack or begin to shift. To stabilize the structure, four stone walls were abutted against its outside surface. Two of them, the one on the north and the example on the west, were built of sandstone blocks in the form of narrow buttresses. The base of the buttress on the north projected beyond the original dirt platform on which the kiva was built onto a thick fill of rubble and earth which had been placed on the hillside subsequent to the preparation of the first platform. A small amount of similar fill had been spread, or had accumulated, adjacent to the kiva before the western buttress was built. Whether the rubble and dirt additions to the platform were simply to create additional space about the kiva or were added specifically to support the buttresses was not clear.

The other two buttresses, one on either side of the ventilator shaft, were walls of rubble faced with masonry. The one on the west of the ventilator was over five feet long; the eastern one was greater than twelve feet in length. Each was over four feet thick in places. They rested upon bedrock. The original height of the buttresses is not known, but to have provided maximum support they should have extended to the same height as the kiva wall.

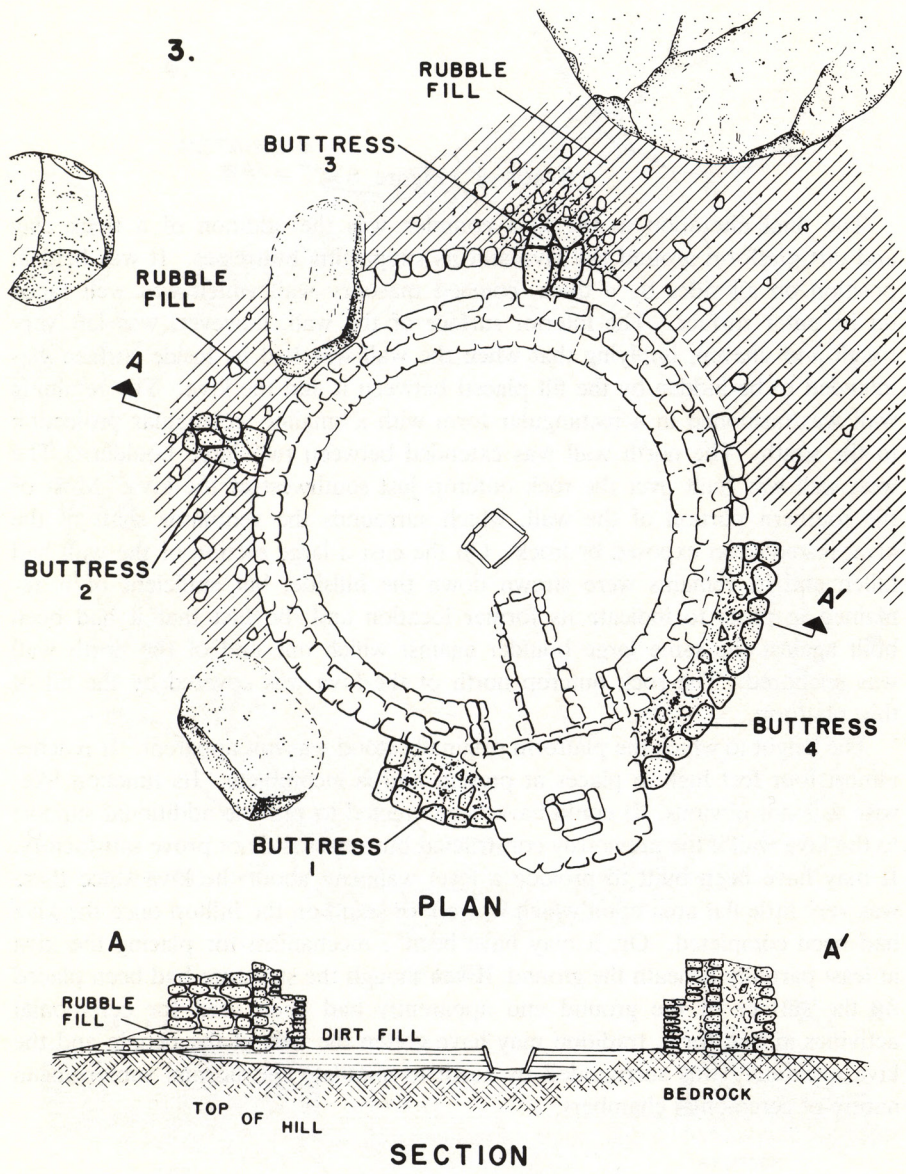


FIGURE 5. Third Stage of Kiva.

STAGE 4 (Figure 6)

The final alteration to the kiva complex was the addition of a thick clay and dirt platform around the kiva and its supporting buttresses. It was held in position on all sides by a thick, coursed masonry wall which was well faced on its outer surface. The interior surface of the wall, however, was left very rough and uneven, implying that when the wall was laid its inside surface was intended to be hidden by the fill placed between it and the kiva. The retaining wall was fashioned in a rectangular form with a smaller rectangular projection to the south. The north wall was extended between two large boulders. The west wall was built over the rock outcrop just southwest of the kiva. Most of the southern portion of the wall, which surrounds the ventilator shaft of the kiva, rested upon exposed bedrock. On the east a large section of the wall had fallen and its remains were strewn down the hillside, but sufficient of it remained in place to indicate its former location and the fact that it had been built against the same large boulder against which one end of the north wall was anchored. The rock outcrop north of the kiva was covered by the fill of this platform.

The height to which the platform originally stood was not apparent. It reaches almost four feet high in places at present and is incomplete. Its function likewise was not obvious. It could have been erected to provide additional support to the kiva wall if the previously constructed buttresses did not prove satisfactory. It may have been built to provide a level walkway about the kiva since there was very little flat area upon which to walk or stand on the hilltop once the kiva had been completed. Or, it may have been a mechanism for placing the kiva at least partially beneath the ground. Even though the structure had been placed on the surface of the ground and apparently had been used for ceremonial activities in that form, tradition may have gotten the best of the people and the kiva eventually was surrounded by earth to simulate the normal subterranean nature of ceremonial chambers.

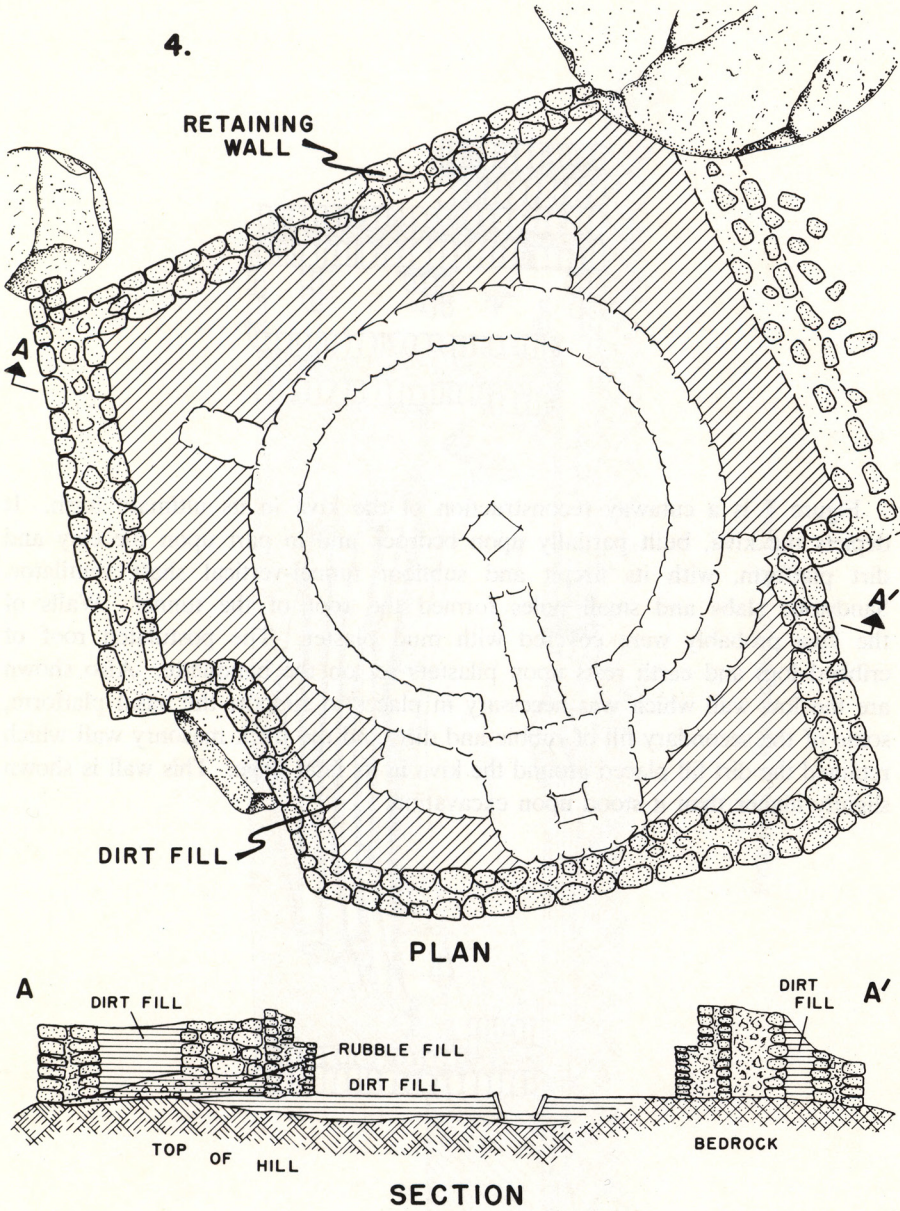


FIGURE 6. Fourth Stage of Kiva.




Figure 7 is a cutaway reconstruction of the kiva in its ultimate form. It depicts the kiva, built partially upon bedrock and in part upon the clay and dirt platform, with its firepit and subfloor tunnel-vertical shaft ventilator. Sandstone slabs and small poles formed the roof of the tunnel. Walls of the kiva probably were covered with mud plaster. The postulated roof of cribbed logs and earth rests upon pilasters set on the banquette. Also shown are the low wall which was necessary in places to support the basal platform, some of the secondary fill of rubble and dirt, and the thick masonry wall which retained the dirt fill placed around the kiva in its final stage. This wall is shown slightly higher than it stood upon excavation.

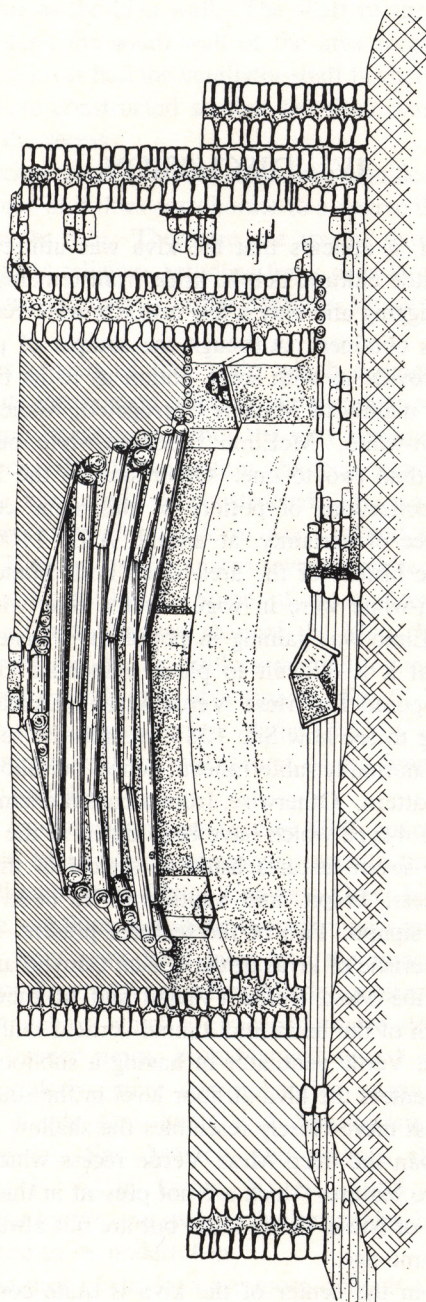


FIGURE 7. Reconstruction of Kiva.

IV. DISCUSSION

As previously stated, it appears that the kiva was utilized for only a short period of time. Very little cultural debris, aside from remains of masonry walls, was noted during the digging and only a few artifacts were recovered. No wood suitable for dating was obtained. Although the sample of potsherds from the site is small, it does provide us with some notion as to its time of occupation. The collection consists mainly of Mancos Corrugated, Mancos Black-on-white, and McElmo Black-on-white. McElmo Black-on-white outnumbers Mancos Black-on-white better than two to one. Other sites in the Mesa Verde which have produced large collections of pottery of this same complex have been dated, with some degree of certainty, at around A.D. 1100. This represents a period in the ceramic history of the area when both Mancos Black-on-white and McElmo Black-on-white were in vogue, but a time when use of Mancos was declining and McElmo was gaining in popularity (Lister, 1965: 65-68).

Despite the fact that it is difficult to place individual kivas in the general evolutionary steps proposed for Mesa Verde kivas (Lancaster *et al.*, 1954: 55-61), it is interesting to see how Site 1086 fits into the sequence. Of course the Mesa Verde kiva is normally subterranean; hence, our above ground structure is immediately out of pattern. Otherwise, from a casual examination, it approximates kivas of the Step 4 type which have been dated in the late A. D. 1000's. It contains five of the seven features listed as typical of this step: banquette, pilasters, southern recess, firepit, and ventilator. It lacks two characteristic features; deflector and sipapu. Two of the features present, however, are types which are more characteristic of kivas of the Chaco Canyon area of northwestern New Mexico than of the Mesa Verde (Vivian and Mathews, 1964: 45-53).

The ventilator, although of the horizontal tunnel-vertical shaft type, differs from the usual style of Mesa Verde ventilator in having a subfloor horizontal tunnel rather than one which enters the kiva at floor level in the southern recess. Likewise, the southern recess more closely resembles the shallow banquette (bench) recess of the Chaco than the deep Mesa Verde recess which gives the kiva a "keyhole" outline. Two features which are not present in this kiva, the deflector and sipapu, are typical of Mesa Verde kivas but are not always found in Chaco Canyon kivas of the same age.

A slab-lined firepit in the center of the kiva is quite common in the Mesa Verde, but the fact that the one in Site 1086 is not oriented in line with the

kiva axis is unusual. One architectural feature that may be of value in placing our kiva in the Mesa Verde sequence is the position of the vertical shaft of the ventilator in relation to the kiva wall. The shaft of the Step 4 kiva is located a short distance behind the south wall of the kiva recess as it is in the above ground kiva. Earlier kivas had the ventilator shaft farther from the kiva and later ceremonial units were constructed so that the shaft was immediately adjacent to the rear wall of the recess.

Although the architectural evidence is of little significance in dating the time of the kiva's use, some of it does corroborate to a degree the information supplied by the pottery from the ruin. Therefore, we assume that the kiva probably was built and employed for religious activities for a decade or two before and after A. D. 1100. This would place it in the McElmo Phase or the early Pueblo III period.

The two obvious aspects of Site 1086 which distinguish it from the usual Mesa Verde kiva, its location on a hilltop independent of a habitation complex and its above ground situation, are not the only unusual features exhibited by the structure. Associated with its location was the necessity of preparing a basal platform before the kiva could be constructed. The wall-supporting buttresses and perhaps the encircling dirt platform were related to the fact that it was a surface building. The kiva itself contains several architectural features normally not found in Mesa Verde kivas. Some of these elements, which are more characteristic of the Chaco Canyon than of the Mesa Verde, and which have been described above, include the subfloor ventilator tunnel, the shallow southern or banquette recess, and lack of a sipapu. Small, isolated, above ground kivas, however, are not a characteristic of the Chaco Canyon. The absence of wall or banquette niches and the orientation of the fireplace also are uncommon in the Mesa Verde tradition.

All of the above conditions or traits set Site 1086 apart as something different in the continuum of Mesa Verde ceremonial architecture. Its unusual nature is due in part to influence from Chaco Canyon. Other kivas in the Mesa Verde contain Chaco-type, subfloor ventilator tunnels, and some had such ventilators originally but they were remodeled later into the typical Mesa Verde above floor type. A thorough analysis of Mesa Verde architecture, especially as employed in mesa-top pueblos, which are receiving more attention from archaeologists now than in former times, probably will reveal additional examples of Chaco elements. Similarly, more comprehensive examination of ceramic remains from Mesa Verde sites likely will demonstrate greater contact with peoples of northwestern New Mexico, and perhaps elsewhere, than is now recognized (Lister, F. C. in Lister, R. H., 1966: 37-39). Additional investigations into the nature and extent of relationships between Chaco Canyon and Mesa Verde need to be undertaken.

Other unusual features of the kiva are more difficult to explain. Why it was built independent of a village, on the top of a small conical knoll, is not apparent.

In all likelihood it had some relationship to neighboring settlements of the same age. The only excavated pueblo in the immediate vicinity is Site 1088, located on the steep talus slope of Morfield Canyon 300 feet north of the hill on which the kiva is situated. The site was cleared in 1965, revealing a village of 17 rooms and two subterranean kivas (Lister and Smith, 1966). It is believed to have been occupied in the period between A. D. 1050 and 1100, which would have made it at least partially contemporaneous with the kiva. The presence of two kivas in a 17-room Mesa Verde pueblo is a normal ratio. There appears to have been no obvious need to construct a third kiva, especially one located away from the village, for the ordinary uses of its inhabitants. Furthermore, had another ceremonial chamber been required at Site 1088, there was plenty of room to place it within or adjacent to the village proper. If the isolated kiva was indeed used by occupants of Site 1088, it must have been for certain very specialized religious purposes. The presence of so many Chaco-like elements in the kiva prompts the suggestion that a group of Chaco Canyon migrants took up residence in the pueblo and, desiring to have their own kiva, chose to locate it on the most prominent feature of the immediate landscape.

Three small unexcavated sites, 1084, 1085, and 1087, exist in the area of the Morfield Campground just south and southwest of the conical knoll. From surface indications and potsherds collected from the sites, they have been assigned to the Pueblo II period. It is impossible to state whether they existed when the hilltop kiva was in use. No kiva depressions were noted in two of the sites. Had they been contemporaneous with Site 1086, there is the possibility that the kiva may have served as a communal ceremonial structure for the two small pueblos.

A final comment about Site 1086 is related to the matter of Mesoamerican influence in the Southwest. Those readers familiar with the placement of Mesoamerican religious structures upon pyramidal bases may see a similarity between them and our above ground kiva situated on the top of a conical knoll. The symmetrical hill, although a natural phenomenon, provided a prominent elevated location for a religious building not unlike that created by Mesoamerican pyramids. I am not adverse to suggesting that Site 1086 be considered when examining the growing list of elements attributed to Mesoamerican influence in the prehistoric American Southwest.

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